

Notice of Allowability	Application No.	Applicant(s)	
	09/767,210	BERESTOV, ALEXANDER	
	Examiner	Art Unit	
	Anand Bhatnagar	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/28/04.
2. ☒ The allowed claim(s) is/are 1,3,4,6-13,15-32,35-42 and 44-47.
3. ☒ The drawings filed on 01/18/01 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Allowable Subject Matter

1. Applicant has amended claims 1, 3, 4, 6, 7, 13, 23, 27, 35, 37, 44, 45, and 46. Claims 2, 5, 14, 33, 34, 43, and 48 have been canceled. Currently claims 1, 3, 4, 6-13, 15-32, 35-42, and 44-47 are pending.
2. After further review of the 35USC, 2nd paragraph rejection, for claim 4, examiner believes that there is antecedent basis present for the limitation and withdraws this rejection.
3. Claims 1, 3, 4, 6-13, 15-32, 35-42, and 44-47 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter: The closest prior art of Kim et al. ("Robust 3-D Depth Estimation Using Genetic Algorithm in Stereo Image Pairs," Proceedings of IEEE Asia Pacific Conference on circuits and Systems; pages 357-360, Nov. 18-21, 1996; Seoul, Korea). Kim discloses to obtain stereo images and form a 3D image from these two 2-dimensional images. Further, Kim teaches to correct the illumination errors in the stereo images. Regarding claim 1: Kim does not teach the feature of "adjusting a corresponding screen parallax for the composite image wherein the step of correcting illumination errors comprises the substeps of: selecting a first group of pixels from a first image of the pair of stereo images; selecting a second group of pixels from a second image of the pair of stereo images, the second group of pixels being respectively associated with the first group of pixels; determining an intensity level for each pixel in both groups of pixels; determining a mean intensity level and a variance for each of the first and second groups of

pixels; equalizing the mean intensity level and the variance of the first group and the second group; and adjusting the pixels to equalize the mean intensity level and the variance of the first group and the second group," that, in combination with the other claim limitations.

Regarding claim 13: Kim does not teach the limitation of "adjusting a corresponding screen parallax for the composite image, wherein the step of removing distortions comprises the substeps of: removing depth plane curvature amongst the pair of stereo images by determining a representation of the pair of stereo images, the representation having a parallel geometry with respect to one or more X-ray sources used to form the radiographs, and determining pixel values for the representation based on the plurality of pixels in the pair of stereo images; and removing keystone distortion amongst the pair of stereo images," that, in combination with the other claim limitations.

Regarding claim 23: Kim does not teach the feature "of adjusting a corresponding screen parallax for the composite image, wherein the object comprises at least one item, and the step of removing distortions from the pair of stereo images includes sub steps for adjusting the radiographs, the substeps comprising: locating at least one physical pointer disposed around the object; capturing the pair of stereo radiographs using a radiograph-imaging device, wherein the physical pointer is captured in the pair of radiographs; determining a location of the physical pointer; estimating geometry and horizontal and vertical distortions using the location of the physical pointer appearing in the pair of

stereo images; and adjusting at least one image of the pair of stereo images vertically and horizontally to correct for any estimated distortions, that, in combination with the other claim limitations.

Regarding claim 27: Kim does not teach the feature of "removing depth plane curvature amongst the first and second images by determining a representation of the pair of stereo images the representation having a parallel geometry with respect to one or more X-ray sources used to form the radiographs and determining pixel values for the representation based on the plurality of pixels in the pair of stereo images; and removing keystone distortion amongst the first and second images," that, in combination with the other claim limitations.

Regarding claim 37: Kim does not teach the feature of "wherein the means for removing distortions from the pair of stereo images comprises: means for rotating the first and second images to eliminating the depth plane curvature therewithin; and coupled to the means for eliminating depth plane curvature, means for eliminating keystone distortion within the pair of stereo images," that, in combination with the other claim limitations.

Regarding claim 46: Kim does not teach the feature of "removing depth plane curvature from the pair of stereo images by determining a representation of the pair of stereo images, the representation having a parallel geometry with respect to one or more X-ray sources used to form the radiographs, and determining pixel values for the representation based on the plurality of pixels in

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the pair of stereo images; removing keystone distortions from the pair of stereo images," that, in combination with the other claim limitations.

5. Any comments considered necessary by the applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Bhatnagar whose telephone number is (703) 306-5914, whose supervisor is Amelia Au whose number is 703-308-6604, group fax is 703-872-9306, and Tech center 2600 customer service office number is 703-306-0377.



Anand Bhatnagar

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September 20, 2004



**SAMIR AHMED
PRIMARY EXAMINER**